

Work Order ID 157764

Thursday, February 23, 2017 10:52:33 AM

157764

LH

Page 1

Item ID: D119-646-143

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/27/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

FEB 23 2017

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3905-043	D(DEO)
IIN-D119-646	C

100

Document Control

0.00

100

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D119-646-143
CHG 004

N/A

110

0.00

110

Skid tubes

Memo

0.00

Skid tubes

1- Inspect Mat'l D2500-1-190 for damage
2- Ensure squareness of ends

> DP 12-2-27

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By 	
								Lead hand / Supervisor Approval Verification 	
								QC / QA Coordinator Approval 	

Root Cause			FAULT CATEGORY					
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong			
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions			
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance			
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect			
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing			
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved			
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing			
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish			
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread			
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence			
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____						
Misidentified ☐	☐ Past Due							

Work Order ID 157764***157764***

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Thursday, February 23, 2017 10:52:33 AM

Item ID: D119-646-143**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH**Start Date:** 3/6/2017 **Start Qty:** 1.00 ***1*****Cust Item ID:****Required Date:** 3/27/2017 **Req'd Qty:** 1.00 ***1*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start*****NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop*****NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	Chemical Conversion Coat per QSI005 4.1	0.00							
120									
HandFinish	Memo	0.00							
Hand Finishing									
130	QC7-Inspect Chemical Conversion Coat	0.00							
130									
QC	Memo	0.00							
Quality Control									

 17-2-27

① 17-02-27 PD

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 157764

Thursday, February 23, 2017 10:52:33 AM

157764

Page 3

Item ID: D119-646-143**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH**Start Date:** 3/6/2017 **Start Qty:** 1.00***1*****Cust Item ID:****Required Date:** 3/27/2017 **Req'd Qty:** 1.00***1*****Customer:****Reference:****Approvals:****Process Plan:** _____**Date:** _____**Tooling:** _____**Date:** _____**Run Start*****NR1*****QC:** _____**Date:** _____**SPC (Y/N):** _____**Date:** _____**Stop*****NR2*****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

150

0.00

150

Skidtubes

Skidtubes

Memo

0.00

1- Install drill jig DT9480 drill all x-bolt spacer holes using 3/16 drill first side only.

2- 2nd side, locating from first saddle holes use DT9861 A/B to drill 2nd side fwd saddle holes.

3- 2nd side locating from fwd saddle drill remaining crossbolt spacer holes using DT9480

4- Scribe batch # inside aft end of tube

155

0.00

155

CNC Bend 1

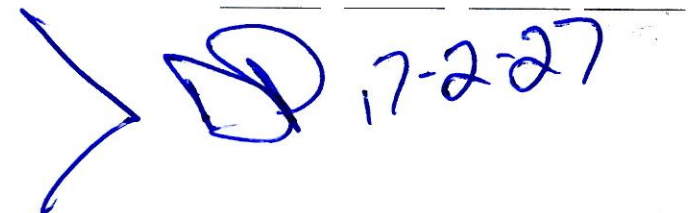
CNC Delta 100 Bender

Memo

0.00

1- Bend AFT end of tube using CNC Bender 1 and bend prog. D3905 AFT as per dwg D3905. Must use bending Aid DT9538, located 23.25" from Aft end.

2- Ensure bending Aid DT9538 is positioned correctly, that the bender set up in on full wide and that the indexing ridge is covered with graphite grease.



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐			
Misidentified ☐	Past Due ☐																																																																

157764

Thursday, February 23, 2017 10:52:33 AM

N900040100

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Start Date: 3/6/2017 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 3/27/2017 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Operation Description

Set Up/ Run Hours

Tool ID

Tool #**Plan
Code**

**Accept
Qty**

Reject
QtyReject
Number**Insp.
Stamp**

**DAS
18
9-89**

165

QC5- Inspect part completeness to step on W/O

0.00

165

OC

Memo

0.00

Quality Control

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process								
Misidentified ☐	☐ Past Due	OTHER :							

Work Order ID 157764***157764***

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Thursday, February 23, 2017 10:52:33 AM

Item ID: D119-646-143

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 3/27/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180		0.00							
180									
Skidtubes									
Skidtubes									
	Memo	0.00							
	1- Verify dimention of bend as per dwg D3905								
	2- Buff out marks left from bending.								
	3- Drill Aft Float bag holes using DT9493 as per dwg D3905 detail G and section F-F, spot face most fwd, top facing float bag holes to 0.5626" to accomodate insert (1 per side) open to finished size								
	4- Drill Aft wearplate and wearpad holes using DT9545 as per dwg D3905 detail H open to finished size								
	5- Open x-bolt spacer holes to finished size as per dwg (sections D-D and E-E) ***DO NOT OPEN FWD SADDLE HOLES***								
	6- Deburr, blow out chips from inside of tube								
	7-Bond web in place as per Dwg D3905 & QSI 015. A/RSikaflex-291 <u>M136652</u> Sikaflex expire date: <u>17-2-7</u> Start: <u>8AM 17-2-28</u> Time: _____ Finish: _____ Time: _____ ***** (Adhere for 12 hours) *****								

DD 17-2-27

DD 17-2-28

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
Date :	Step #:	QTY Effective :			MRB (QSI042) Approval	
Description Work Order Deviation		Disposition				
					Completed By	
					Lead hand / Supervisor Approval Verification	
					QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐						

Work Order ID 157764***157764***

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Thursday, February 23, 2017 10:52:33 AM

Item ID: D119-646-143**Accept*****N900040100*****Setup Start *NS1*****Revision ID:****Stop *NS2*****Item Name:** AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH**Start Date:** 3/6/2017 **Start Qty:** 1.00 ***1*****Cust Item ID:****Required Date:** 3/27/2017 **Req'd Qty:** 1.00 ***1*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start *NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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190

QC5- Inspect part completeness to step on W/O

0.00

100

QC

Memo

0.00

Quality Control

1 0 17-03-01DAS
18
9-09

200

0.00

200

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1- Bend Fwd end of tube using bender 1 and bend prog. D3905 Fwd.Use bending aid DT9544 ensure proper positioning

2- Cut Fwd end of tube as per dwg.

VERIFY MEASUREMENT BEFORE CUTTING



DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Work Order ID 157764

Thursday, February 23, 2017 10:52:33 AM

157764

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Item ID: D119-646-143

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 3/27/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210		0.00							
210									
Skidtubes	Memo	0.00							
Skidtubes	1- Buff out marks left from bending								
	2- Drill Fwd cap holes using DT8215.								
	3- Open Fwd saddle holes to finished size as per dwg								
	4- Drill Fwd x-bolt hole using DT9816 and open to finished size as per dwg.								
	5- Drill 1.87" and 3.74 holes using DT10045 A&B locate from FWD saddle hole hole. (verify measurement) as per dwg.								
	6- Drill towing hole and open to finished size using DT10047 locate from fwd saddle hole.								
	7- Drill wearplate holes using DT9613, open to finished size as per dwg D3905-043								
	8- Open FWD & AFT cap holes as dwg.								
	9- C'sink FWD cap hole as per detail "C"								
	10- Deburr, blow out chips from inside of tube.								

→ Drill holes detail to open to finished size + spot face per dwg.

and section FF

17-3-1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER :					

Work Order ID 157764

Thursday, February 23, 2017 10:52:33 AM

157764

Page 8

Item ID: D119-646-143

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 3/27/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp**DAS**
18
9-88

220

QC5- Inspect part completeness to step on W/O

0.00

220

QC

Memo

0.00

Quality Control

1 8 1703-01

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐			
Misidentified ☐	Past Due ☐																																																																

Work Order ID 157764

Thursday, February 23, 2017 10:52:33 AM

157764

Page 9

Item ID: D119-646-143 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH
Start Date: 3/6/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 3/27/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

224

0.00

224

0.00

Skidtubes

Memo

NOTE:TACK IN 2 MOST FWD X-BOLT SPACERS AND TEST FIT FWD
GROUND HANDELING FIXTURE,IF FIXTURE FITS WELL THEN
PROCEED. FIXTURE DT10091.

1- Countersink x-bolt holes as per dwg

2- Remove alodine prepare for welding

3- Insert x-bolt spacers

4- Weld x-bolt spacer as per dwg

A/R Alum rod Batch: mk36158

5- Grind welds flush as per dwg

6- Counter bore x-bolt holes as per dwg

7- Deburr

BE17-03-02

BE17-0302

DP17-3-3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :						
Misidentified	☐	Past Due	☐							

Work Order ID 157764

Thursday, February 23, 2017 10:52:33 AM

157764

Page 10

Item ID: D119-646-143

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/27/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
225	QC5- Inspect part completeness to step on W/O	0.00							
225									
QC	Memo	0.00							
Quality Control	TEST FIT USING FIXTURE DT10091.								
226	QC10- Inspect visual per QSI004- ground welds	0.00							
226									
QC	Memo	0.00							
Quality Control									
227	Pressure Wash per QSI005 4.3	0.00							
227									
HandFinish	Memo	0.00							
Hand Finishing	AND REALODINE AS PER PAR09-043								

①

17-03-03

PD

①

17-03-03

PD

①

/

20170307

BEB

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 157764

Thursday, February 23, 2017 10:52:33 AM

157764

Page 11

Item ID: D119-646-143

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 3/27/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240		0.00							
240									
SprayPaint	Memo	0.00							
Spray Painting	*****AS PER DEO DETAIL "K" NOTE 13 MASK THIS AREA, DO NOT APPLY PRIMER OR PAINT*****								
	PRIME AS PER DWG AND QSI 005 4.2 BATCH: <u>136429</u>								
	PAINT WHITE AS PER DWG AND QSI 005 4.2 BATCH: <u>136731</u>								
245	QC14- Inspect Spray Paint	0.00							
245									
QC	Memo	0.00							
Quality Control									

1241 & 17/03/13 **DAS 15 9-89**

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
Date :	Step #:	QTY Effective :			MRB (QS1042) Approval	
Description Work Order Deviation		Disposition				
					Completed By	
					Lead hand / Supervisor Approval Verification	
					QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
☐ OTHER : _____						

157764

Thursday, February 23, 2017 10:52:33 AM

N900040100

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Start Date: 3/6/2017 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 3/27/2017 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

**Insp.
Stamp**

0.00

250

0.00

HandFinish

Memo

Hand Finishing

1-Install inserts as per Dwg D3905.

260

QC5- Inspect part completeness to step on W/O

0.00

260

0.00

QC

Memo

Quality Control

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 157764

Thursday, February 23, 2017 10:52:33 AM

157764

Page 13

Item ID: D119-646-143

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/27/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
270									
HandFinish		0.00							
Hand Finishing	Memo 1-Install wearpads, gaskets and wearplates as per Dwg D3905. Put sikaflex in insert before installing bolts and washers A/RSikaflex-240/-291 <u>M1136652</u> Sikaflex expire date: <u>12/12</u> 2- install plugs assembly with o-ring lube as per dwg. A/R o-ring lube 55 Batch: <u>M1135473</u> 3 -Inspect for foreign objects as per QSI 024 4 -Install Aft Cap and seal with Sikaflex. Clean excess adhesive. A/RSikaflex-240/-291 <u>M1136652</u> Sikaflex expire date: <u>12/12</u> 5- Wing Walk as per dwg QSI005 4.4 Batch: <u>M1136586</u> 6- Install (2)D5101-041 and (1)D5101-047 as per dwg by using DT10117								

164 17103 14

RTU 598 M135385 18/0.1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 157764

Thursday, February 23, 2017 10:52:33 AM

157764

Page 14

Item ID: D119-646-143

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/27/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89
280									
QC	Memo	0.00							
Quality Control									MAR 15 2017
290	Identify as per dwg & Stock Location: _____	0.00							
290									DAS 27 9-89
Packaging	Memo	0.00							
Packaging									MAR 15 2017
300	QC21- Final Inspection - Work Order Release	0.00							
300									
QC	Memo	0.02							
Quality Control									17/3/16 JH

DAS
21
9-89

MAR 16 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, February 23, 2017 10:52:37 AM

Page 1

Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP RevA: New issue DD verified by:EC
12.11.05 (DEOD3905-B-1)(ecn 12-675) DD verf:JLM IPP REV:C 13.03.20
per chg003 ECN13-534 DD verf:JLM IPP REV:D 15.01.19 AS PER ECN-
14-628 DD verf:JLM IPP REV:E 16.11.02 chg as per D3905
revD(DEO) DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN4C46A		Purchased	No			270	Each	114.0000	3	3			
AN4C46A									**			17/03/17	
Bolt													

Location	Loc Qty	Loc Code
FG	8	
123642	2	
m132169	6	
OVER002	70	
m135721	70	X2
ST341	36	
m135312	36	X1

D5101-041		Manufactured	No			270	Each	37.0000	2	2			
D5101-041									**			17/03/17	
Crossbolt Spacer Assembly													

Location	Loc Qty	Loc Code
FP001	37	
137417	5	X2
139261	2	
140171	18	
143449	12	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :						
Misidentified	☐	Past Due	☐							

Picklist Print

Thursday, February 23, 2017 10:52:38 AM

Page 2

Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

D5101-047

Manufactured No

270

Each

7.0000

Start Qty: 1.00
1 1

Required Qty: 1.00

D5101-047

Crossbolt Spacer Assembly

**

all 17/03/13

Location

Loc Qty

Loc Code

FP001

7

144975

7

x1

D5101-3

Manufactured No

270

Each

87.0000

6

6

D5101-3

Insert

**

all 17/03/13

Location

Loc Qty

Loc Code

FP001

87

127964

10

135947

4

141362

49

154094

24

x6

D5101-5

Manufactured No

270

Each

69.0000

6

6

D5101-5

Insert

**

all 17/03/13

Location

Loc Qty

Loc Code

FP001

69

127965

15

135948

6

143389

24

153084

24

x6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

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Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

MS21043-4

Purchased

No

270

Each

Start Qty: 1.00
927.0000 3 3

Required Qty: 1.00

MS21043-4

Nut

**

ll 12/03/12

Location

Loc Qty

Loc Code

FG

40

104603

40

GA

17

m132803

17

OVER007

300

m136406

300

ST302

570

m136148

2

m136192

268

m136263

300

x3

D2500-1-190

Manufactured

No

110

Each

56.0000 1

D2500-1-190

Ext'n - T Beam Tube 4"

**

17-2-27

Location

Loc Qty

Loc Code

HALL

56

151612

56

1

D2579

Manufactured

No

190

Each

48.0000 2 2

D2579

Crossbolt Spacer

**

BE1703-01

Location

Loc Qty

Loc Code

LG001

48

123997

1

141711

47

2

Thursday, February 23, 2017 10:52:38 AM

Shop Packet Print

Page 3

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
☐ OTHER : _____					

Picklist Print

Thursday, February 23, 2017 10:52:38 AM

Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

D2855-3 Manufactured No

270 Each 44.0000 2 2

Start Qty: 1.00

Required Qty: 1.00

D2855-3

Cap

**

all 17/03/13

Location

Loc Qty

Loc Code

FP001

44

B153241

x1

142564

4

x11

151614

40

x11

D3492-5 Manufactured No

270 Each 262.0000 16 16

D3492-5

Plug

**

all 17/03/13

Location

Loc Qty

Loc Code

FP001

262

B137700

x16

133396

8

136396

6

B134740

152195

103

152814

3

153738

70

154740

72

NAS1611-005 Purchased No

270 Each 302.0000 16 16

NAS1611-005

O-RING

**

all 17/03/13

Location

Loc Qty

Loc Code

FP001

302

m136184

23

m136192

79

m136377

200

x16

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Picklist Print

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Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

D3672-1

Manufactured No

270

Each

Start Qty: 1.00
736.0000 2 2

Required Qty: 1.00

D3672-1

Washer, Phenolic

**

17/03/13

Location

Loc Qty

Loc Code

FG

10

85222

10

FP001

688

112218

4

134785

184

150074

500

ST049

38

147077

38

x2

D3681-1

Manufactured No

190

Each

170.0000 8 8

D3681-1

Spacer

**

BE1703-01

Location

Loc Qty

Loc Code

LG001

170

145956

1

151967

4

153806

38

155381

63

155806

64

8

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Thursday, February 23, 2017 10:52:38 AM

Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

D3847-1

Manufactured No

270

Each

Start Qty: 1.00
109.0000 8 8

Required Qty: 1.00

D3847-1

Wearpad

**

all 17/03/13

Location

Loc Qty

Loc Code

FP001

109

153009

5

153010

22

153011

21

153503

14

154780

12

155281

12

155776

18

156401

5

x8

D3847-11

Manufactured No

270

Each

26.0000 1 1

D3847-11

Wearpad

**

all 17/03/13

Location

Loc Qty

Loc Code

FP001

26

151985

4

151986

2

154225

2

154349

12

155829

6

v1

D3847-043

Manufactured No

270

Each

10.0000 1 1

D3847-043

Wearplate Fwd

**

all 17/03/13

Location

Loc Qty

Loc Code

FP002

10

139751

2

153533

8

x1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Thursday, February 23, 2017 10:52:38 AM

Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

D3847-045

Manufactured No

270

Each

10.0000

Start Qty: 1.00

Required Qty: 1.00

1 1

D3847-045

Wearplate Center

**

17/03/13

Location

Loc Qty

Loc Code

FP002

10

136771

2

139752

4

153474

4

D3847-049

Manufactured No

270

Each

12.0000

1

1

D3847-049

Aft Wearplate Assembly, Float Gear

**

17/03/17

Location

Loc Qty

Loc Code

FP002

12

139750

12

D3885-3

Manufactured No

170

Each

12.0000

1

1

D3885-3

Float Web

**

17-2-28

Location

Loc Qty

Loc Code

LG002

12

140548

2

154332

10

D3903-1

Manufactured No

190

Each

58.0000

12

12

D3903-1

Spacer

**

17/03/01

Location

Loc Qty

Loc Code

LG001

58

152993

1

154083

57

12

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
						QC / QA Coordinator Approval			

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____						
Misidentified	☐	Past Due	☐							

Picklist Print

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Thursday, February 23, 2017 10:52:38 AM

Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

Start Qty: 1.00

Required Qty: 1.00

D3672-3

Manufactured No

270

Each

1,244.000

12

12

D3672-3

Washer, Phenolic

Location

Loc Qty

Loc Code

FG

100

133083

52

134449

48

FP001

197

132639

197

ST049

447

151298

6

153292

441

ST051A

500

149295

0

153930

500

D3683-3

Purchased

No

250

Each

227.0000

12

12

D3683-3

Insert

Location

Loc Qty

Loc Code

FP001

34

47805

34

ST051

193

47805

193

NAS1149A0416J

Qty 6

Batch: M131511

(x6) 17/03/17

Thursday, February 23, 2017 10:52:38 AM

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Page 8

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER :							
Misidentified ☐	☐ Past Due								

Picklist Print

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Page 9

Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

ALS4-1032-130 AELS4-1032-130 Purchased No 250 Each 4,866.000 42 42

Start Qty: 1.00

Required Qty: 1.00

AI S4-1032-130

Rivnut

**

all 17/03/17

Location	Loc Qty	Loc Code
CCK007	4644	
M136579	4644	
FG	50	FG
M135442	50	
FP001	172	
M133077	72	
M135442	100	

x42

AN3C5A Purchased No 270 Each 1,006.000 44 44

AN3C5A

Bolt

**

all 17/03/17

Location	Loc Qty	Loc Code
FG	5	
122800	5	
FP001	429	
M136047	33	
M136648	396	
OVER002	400	
M136182	100	
M136450	200	
M136579	100	
ST350	172	
M134676	2	
M135442	170	

x44

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Page 9

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, February 23, 2017 10:52:38 AM

Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

NAS1149C0332R

Purchased

No

270

Each

Start Qty: 1.00
3,721.000 44 44

Required Qty: 1.00

NAS1149C0332R

17/03/17

WASHER

Location	Loc Qty	Loc Code	
FP001	600	M136975	x41
m126319	54		
m127831	54		
m136537	28		
m136741	464		
GA	544		
m133284	44		
m136444	500		
ST260a	2200		
m135408	0		
m135766	500		
m135908	200		
m136042	500		
m136643	1000		
ST266	377		
m135466	377		

NAS1149C0463R

Purchased

No

270

Each

289.0000 12 12

NAS1149C0463R

Washer

Location	Loc Qty	Loc Code	
FP001	25		
m127306	25		
ST266	264		
m134167	64		
m136263	200		

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, February 23, 2017 10:52:39 AM

Page 11

Work Order ID: 157764

157764

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 3/6/2017

Required Date: 3/27/2017

MS27039C4-08

Purchased No

270 Each

Start Qty: 1.00
232.0000 12 12

Required Qty: 1.00

MS27039C4-08

SCREW

Location

Loc Qty

Loc Code

FP001

16

m126319

16

over006

15

m135895

15

ST276

201

m126319

113

m128429

88

MS24694-C52

Purchased No

270 Each

86.0000 2 2

MS24694-C52

SCREW

Location

Loc Qty

Loc Code

FP001

82

m135978

82

ST285

4

m127059

4

all 17/03/13

x2

DQA: _____ Date: _____



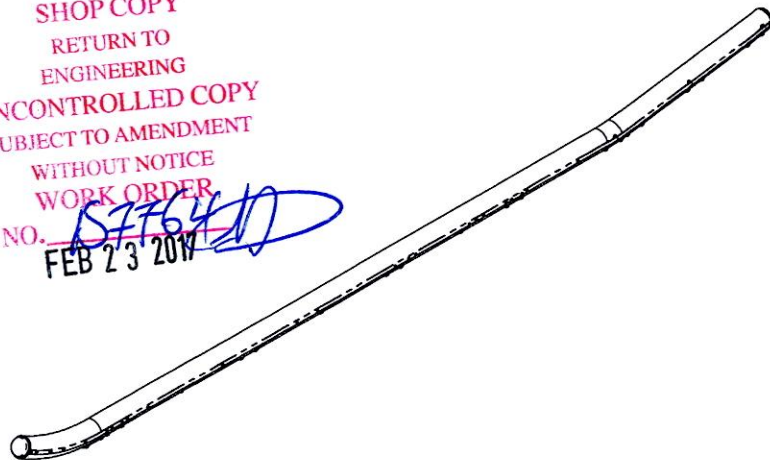
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 15776410
FEB 23 2014



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD (SHOWN)
D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE (SIMILAR)
D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE (SIMILAR)

NOTES:

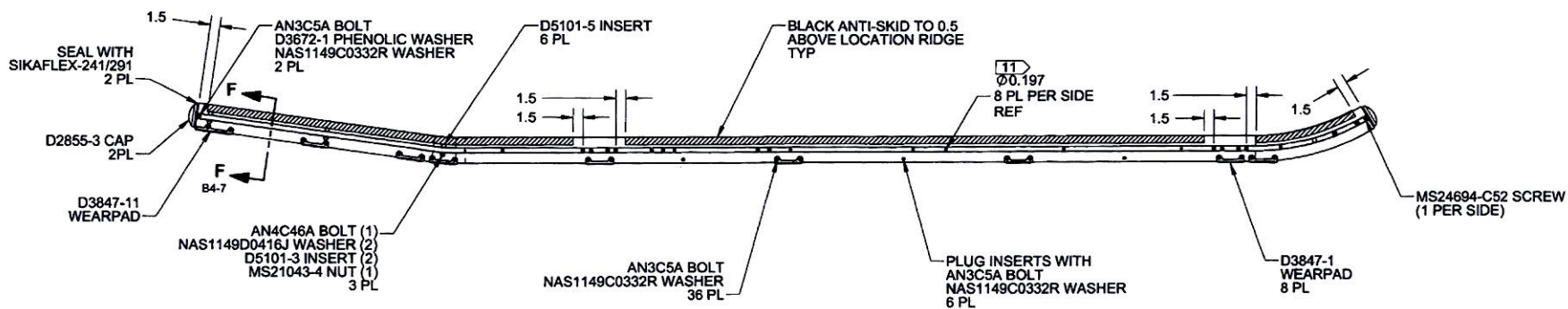
- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3885-3 FLOAT WEB PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2 BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3905-041 = 35.4 lbs
D3905-043 = 42.8 lbs
D3905-045 = 48.0 lbs
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 8.5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP 0.020" DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) INSERT D3885-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP
- 11) INSERT D3492-045 PLUG ASSY INTO ϕ 0.197 HOLES (BOTH SIDES OF TUBE)
- 12) USE DART DRILL TEMPLATE DT8932 TO LOCATE AND DRILL ϕ 0.297 HOLES FOR WEARPLATE INSERTS. INSTALL AELS-1032-130 INTO D3905-11 ONLY. INSTALL AN3C5A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/291.

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3905-041	FLOAT SKIDTUBE ASSY WITH WEARPAD
2		X		D3905-043	FLOAT SKIDTUBE ASSY WITH WEARPLATE
3			X	D3905-045	FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE
10	2	2	2	D2579	CROSS BOLT SPACER
11	2	2	2	D2855-3	CAP
12			16	D3411-3	WASHER
13	16	16		D3492-045	PLUG ASSY
14	2	2	2	D3672-1	PHENOLIC WASHER
15	8	8	8	D3681-1	SPACER
16	8	8	1	D3847-1	WEARPAD
17	1	1	1	D3847-11	WEARPAD
18		1		D3847-043	FWD WEARPLATE ASSY
19		1		D3847-045	CENTER WEARPLATE ASSY
20		1		D3847-049	AFT WEARPLATE ASSY
21			1	D3849-045	AFT WEARPLATE ASSY
22			1	D3849-047	FWD WEARPLATE ASSY
23	1	1	1	D3885-3	FLOAT WEB
24	12	12	12	D3903-1	SPACER
25			16	D3904-1	WASHER
26	1	1		D3905-11	FLOAT SKIDTUBE
27			1	D3905-13	FLOAT SKIDTUBE
28	6	6	6	D5101-3	INSERT
29	6	6	6	D5101-5	INSERT
30	3	3	3	D5101-041	CROSSBOLT SPACER ASSY
41	42	42	10	ALS4-1032-130	INSERT
42	44	44	12	AN3C5A	BOLT
43			4	AN3C46A	BOLT
44			4	AN3C50A	BOLT
45	3	3	3	AN4C46A	BOLT
46	44	44	8	NAS1149C0332R	WASHER (OR AN960C10L)
47	12	12	12	NAS1149C0463R	WASHER (OR AN960C416)
48	6	6	6	NAS1149D0416J	WASHER
49			8	MS21043-3	NUT
50	3	3	3	MS21043-4	NUT
51	2	2	2	MS24694-C52	SCREW

DEO ATTACHED
RELEASED

2014 NOV 24
ECN 14-025

D	REVISED DIMENSIONS AND PROVIDED TOLERANCE TO SKIDTUBE OVERALL LENGTH PAGE 5-6 REVISED NOTE 2 AND NOTE 7 PAGE 1 (ZN B8, ZN A8-1) REVISED -041/043/045 DRAWING VIEWS, REVISED SECTION VIEW F-F (ZN B4-7), REVISED BOM REF. PAR13-299 AND PAR13-272	AK	14.08.08
C	(SHT 1 P/L, ZN C2-2, C2-3, C2-4) ITEM 13, QTY 2 WAS 4, ITEM 42 AND 45, QTY 44 WAS 46, ADD ITEM 48, MS24694-C52 WAS AN3C5A, D3672-1 AND NAS1149C0332R, (ZN C7-7) ϕ 0.201 CSK ϕ 0.385 X 100" WAS ϕ 0.204 THRU, (ZN A4-5, A4-6) ADD RELIEF INSTRUCTION, ADD ITEM 10, CROSS BOLT SPACER (ZN D4-1, C8-7, D8-7)	DB	13.02.21
B	REVISED PART LIST, ALS4-1032-130 WAS AELS-1032-130 (ZN A5-5, A5-6, C5-7, C5-7, A5-7), ADD DT8932 (ZN A8-1), D2855-3 WAS D2579 (ZN C8-2, C1-2, C8-3, C1-3, C8-4, C1-4), AN3C5A WAS AN3C4A (ZN C7-2, C1-2, C7-3, C1-3, C7-4, C1-4), D3849-047 WAS D3849-041 (ZN B3-4), ADD D3411-3 (ZN B3-4), ADD AN3C50A (ZN B3-4), ϕ 0.313 WAS ϕ 0.328 (B2-5, B2-6, C2-7, A8-7 & D7-8), REVISED NOTE IV (ZN A8-7)	RF	09.06.30
D	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	ML	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF	REV. D	
CHECKED	VS	D3905	
MFG. APPR.	DD	SHEET 1 OF 8	
APPROVED	HS	TITLE	
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	
DATE	14.08.08	SCALE	
COPYRIGHT © 2000 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD
(MAKE FROM D3905-11 SKIDTUBE)

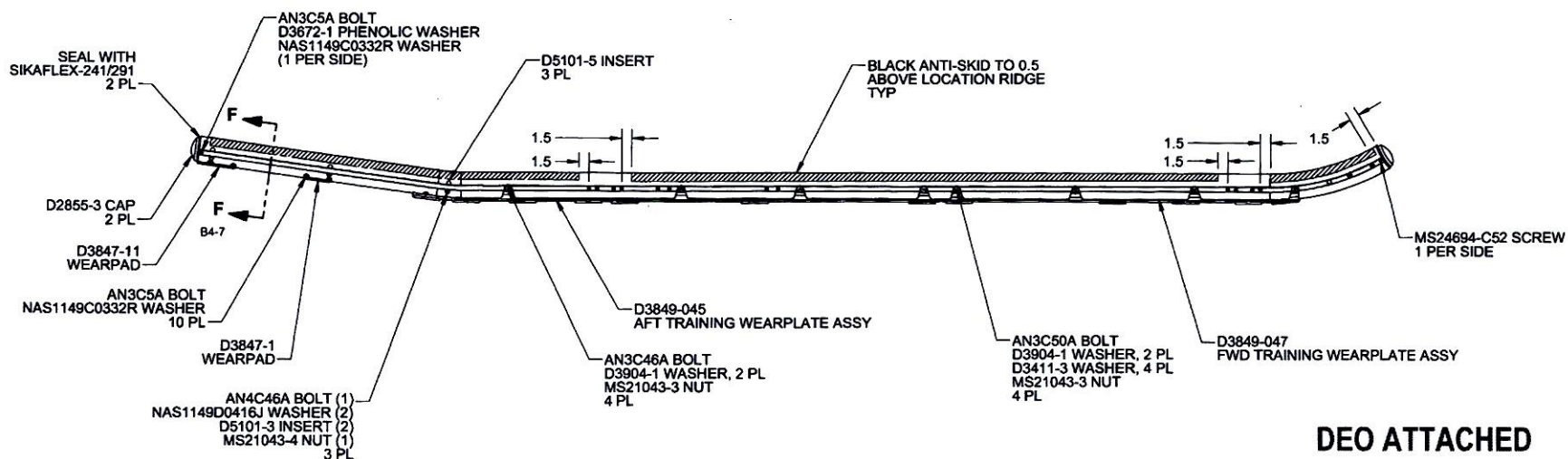
DEO ATTACHED

RELEASED

2014 NOV 24

APPROVED

DESIGN	ML	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	VS	DRAWING NO.	REV. D
MFG. APPR.	DD	D3905	SHEET 2 OF 8
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	14.08.08	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC.	
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D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE
(MAKE FROM D3905-13 SKIDTUBE)

DEO ATTACHED

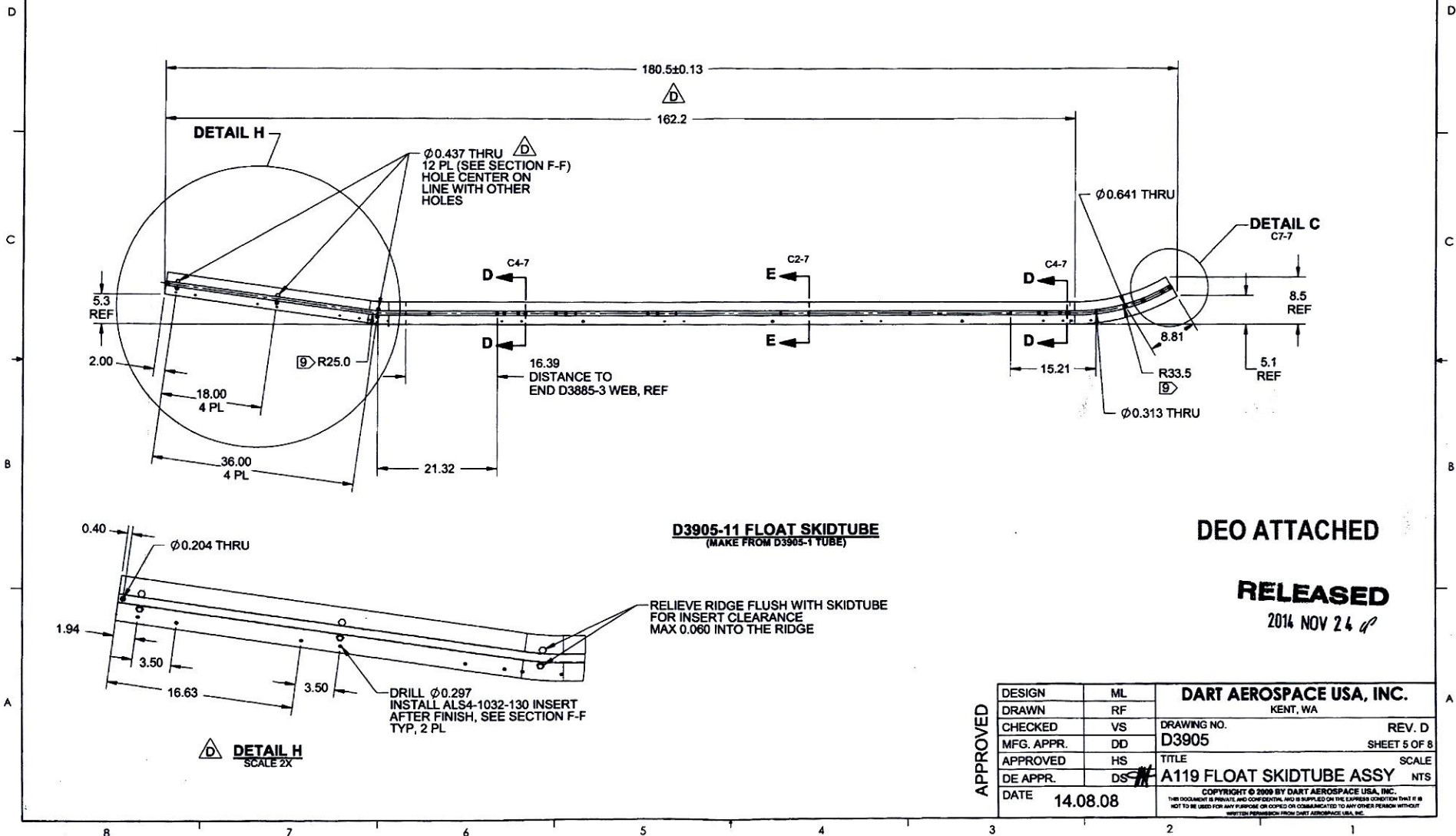
RELEASED

2014 NOV 24

APPROVED

DESIGN	ML	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	VS	DRAWING NO.	REV. D
MFG. APPR.	DD	D3905	SHEET 4 OF 8
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	14.08.08	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1



DETAIL G

Ø0.437 THRU
12 PL (SEE SECTION F-F)
HOLE CENTER ON
LINE WITH OTHER
HOLES

5.3
REF

2.00

18.00

4 PL

R25.0

21.32

16.39
DISTANCE TO
END D3885-3 WEB, REF

36.00

4 PL

0.40

Ø0.204 THRU

1.94

3.50

3.50

16.63

DETAIL G
SCALE 2X

D3905-13 FLOAT SKIDTUBE
(MAKE FROM D3905-1 TUBE)

RELIEVE RIDGE FLUSH WITH SKIDTUBE
FOR INSERT CLEARANCE
MAX 0.060 INTO THE RIDGE

DRILL Ø0.297
INSTALL ALS4-1032-130 INSERT
AFTER FINISH, SEE SECTION F-F
TYP, 2 PL

180.5±0.13

162.2

Ø0.641 THRU

C7-7
DETAIL C

8.4
REF

5.1
REF

R33.5

Ø0.313 THRU

C4-7

D

15.21

C2-7

E

DEO ATTACHED

RELEASED

2014 NOV 24

APPROVED

DESIGN	ML	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	VS	DRAWING NO.	REV. D
MFG. APPR.	DD	D3905	SHEET 6 OF 8
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	14.08.08	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1

D

C

B

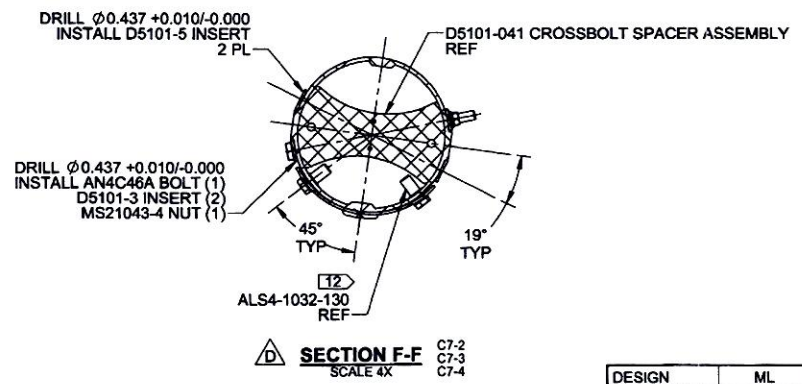
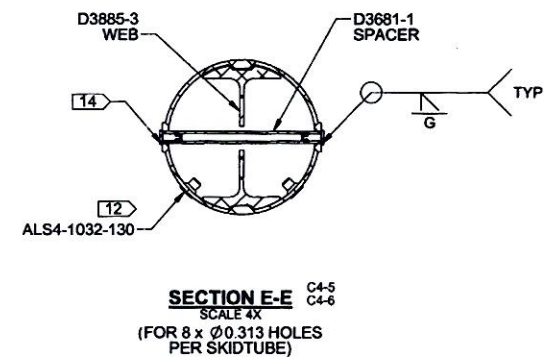
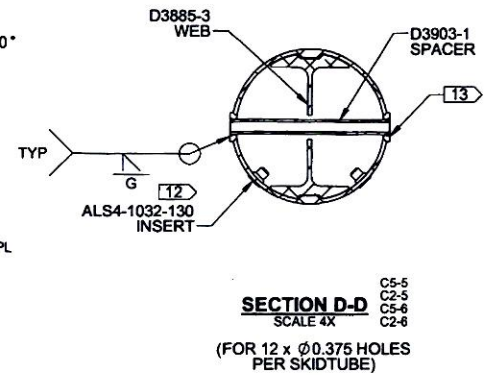
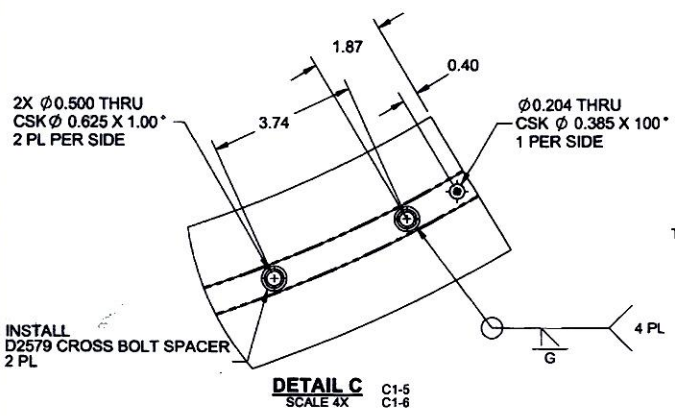
A

D

C

B

A



- NOTES:**
- 13) AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
- i) CHAMFER HOLES Ø0.475 x 45° (BOTH SIDES)
 - ii) INSERT D3903-1 SPACER
 - iii) WELD INTO PLACE AND GRIND FLUSH
 - iv) C'BORE TO 0.313 x 0.75 DEEP
 - v) DEBURR HOLES
- 14) AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.313 HOLES ONLY:
- vi) CHAMFER HOLES Ø0.354 x 45° OR 0.050 DEEP x 45° (BOTH SIDES)
 - vii) INSERT D3681-1 SPACER
 - viii) WELD INTO PLACE AND GRIND FLUSH
 - ix) DEBURR HOLES

DEO ATTACHED

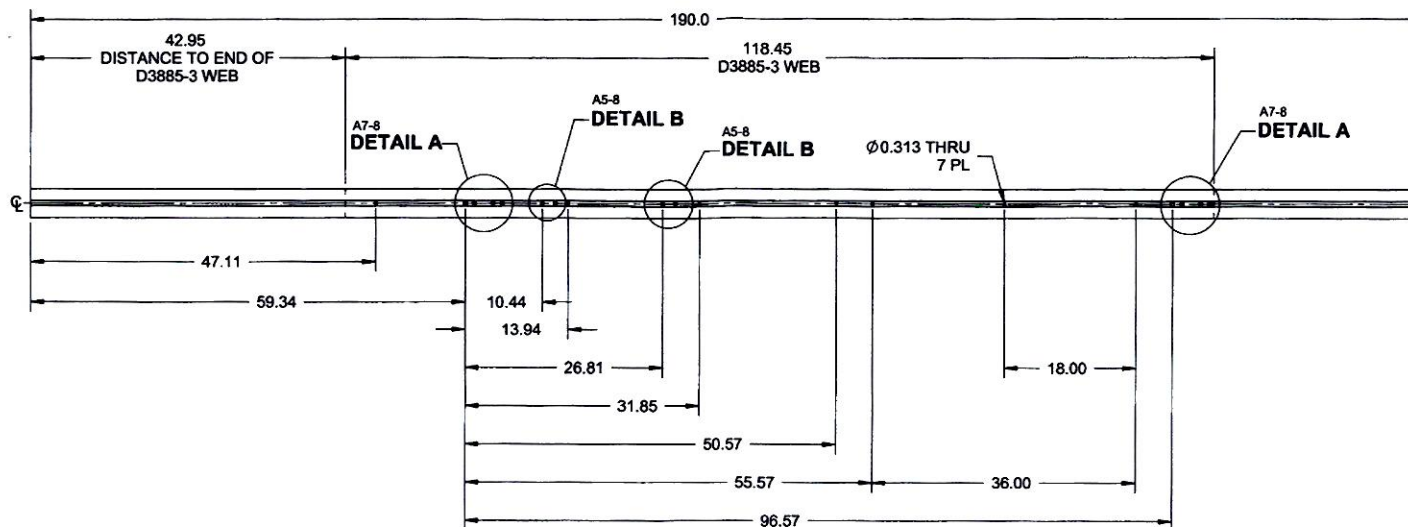
RELEASED

2014 NOV 24

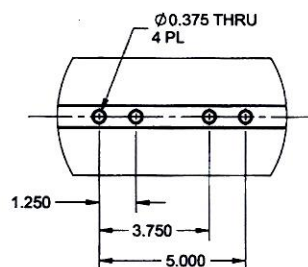
APPROVED

DESIGN	ML	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	VS	DRAWING NO.	REV. D
MFG. APPR	DD	D3905	SHEET 7 OF 8
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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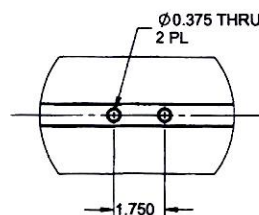
8 7 6 5 4 3 2 1



D3905-1 TUBE
(MAKE FROM D2500-1-190 EXTRUSION)



DETAIL A
SCALE 4X D6-8
D2-8



DETAIL B
SCALE 4X D5-8
D4-8

DEO ATTACHED

RELEASED

2014 NOV 24

APPROVED

DESIGN	ML	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF		
CHECKED	VS	DRAWING NO.	REV. D
MFG. APPR.	DD	D3905	SHEET 8 OF 8
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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DRAWING NO. D3905	TITLE A119 FLOAT SKIDTUBE ASSY	REV. D	DART AEROSPACE USA, INC.	D.E.O. NO. D3905-D-1	SHEET NO. SHEET 1 OF 3	SCALE NTS
DRAWN AJS	CHECKED <i>11/1</i>	MFG. APPR. <i>MA</i>	APPROVED <i>011</i>	DE APPR. <i>11/1</i>		
DATE 16.10.31	DATE <i>16/11/61</i>	DATE <i>16.11.01</i>	DATE <i>2016.11.01</i>	DATE <i>2016.11.01</i>		

SHEET 1 MODIFY PARTS LIST AS SHOWN:

IS:

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3905-041	FLOAT SKIDTUBE ASSY WITH WEARPAD
2		X		D3905-043	FLOAT SKIDTUBE ASSY WITH WEARPLATE
3			X	D3905-045	FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE

(ADD)	30	2	2	2	D5101-041	CROSSBOLT SPACER ASSY
	31	1	1	1	D5101-047	CROSSBOLT SPACER ASSY

(ADD)	40	6			AN3C4A	BOLT
	42	38	44	12	AN3C5A	BOLT

WAS:

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3905-041	FLOAT SKIDTUBE ASSY WITH WEARPAD
2		X		D3905-043	FLOAT SKIDTUBE ASSY WITH WEARPLATE
3			X	D3905-045	FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE

30	3	3	3	D5101-041	CROSSBOLT SPACER ASSY
----	---	---	---	-----------	-----------------------

42	44	44	12	AN3C5A	BOLT
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SHEET 1 ADD NOTE 13 AS SHOWN:

NOTES:

13) MASK THIS AREA. DO NOT APPLY PRIMER OR PAINT

RELEASED
2016 -11- 0 1

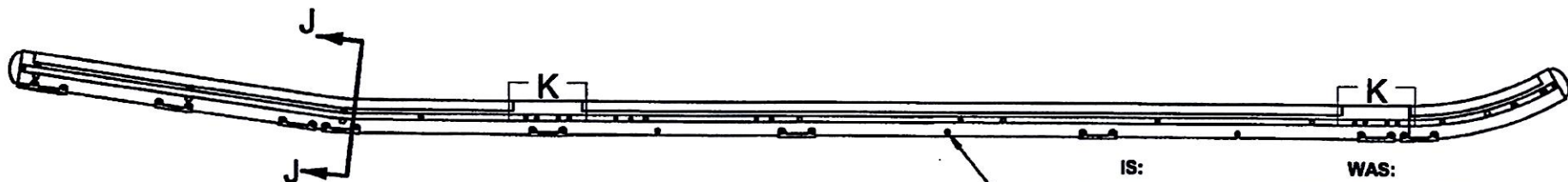
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DRAWING NO. D3905	TITLE A119 FLOAT SKIDTUBE ASSY	REV. D	DART AEROSPACE USA, INC. ENGINEERING ORDER	D.E.O. NO. D3905-D-1	SHEET NO. SHEET 2 OF 3	SCALE NTS
DRAWN AJS	CHECKED <i>q</i>	MFG. APPR. <i>A</i>	APPROVED <i>QW</i>	DE APPR. <i>H</i>		
DATE 16.10.31	DATE 16/11/16	DATE 16.11.01	DATE 2016.11.01	DATE 2016.11.01		

SHEET 2: (1) AT THE BEND LOCATION ONLY REPLACE D5101-041 WITH D5101-047 AS SHOWN IN SECTION J-J.
(2) ADD DETAIL K
(3) UPDATE PLUGGING FASTENERS AS SHOWN:

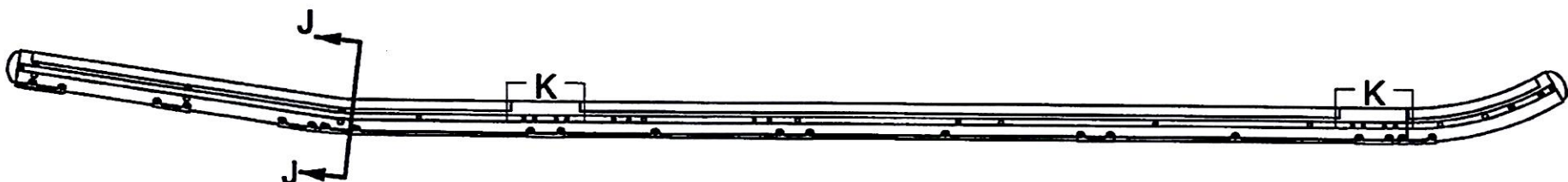


**D3905-041 FLOAT SKIDTUBE ASSY
WITH WEARPAD**

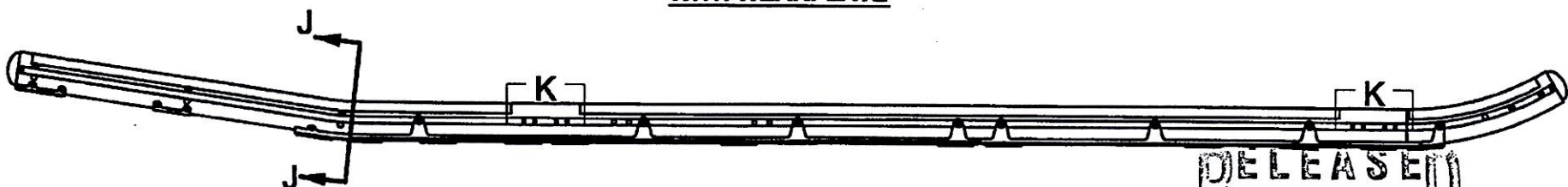
IS:
PLUG INSERTS WITH
AN3C4A BOLT
NAS1149C0332R WASHER
6 PL

WAS:
PLUG INSERTS WITH
AN3C5A BOLT
NAS1149C0332R WASHER
6 PL

SHEETS 3 AND 4: (1) AT THE BEND LOCATION ONLY REPLACE D5101-041 WITH D5101-047 AS SHOWN IN SECTION J-J.
(2) ADD DETAIL K



**D3905-043 FLOAT SKIDTUBE ASSY
WITH WEARPLATE**



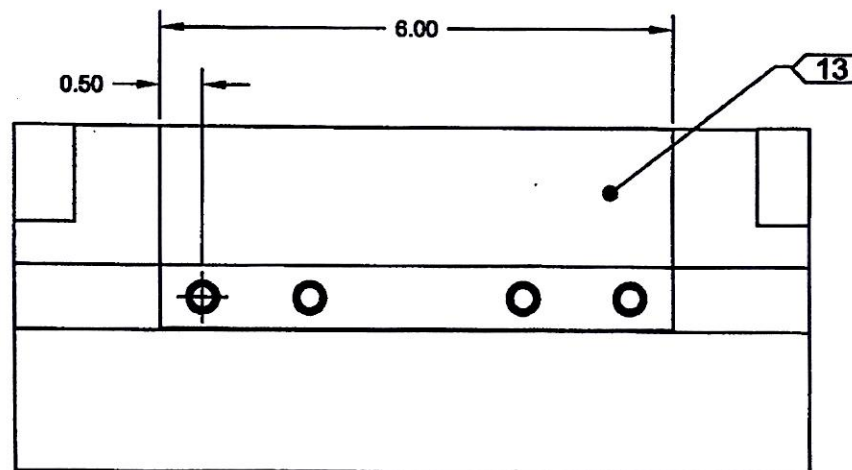
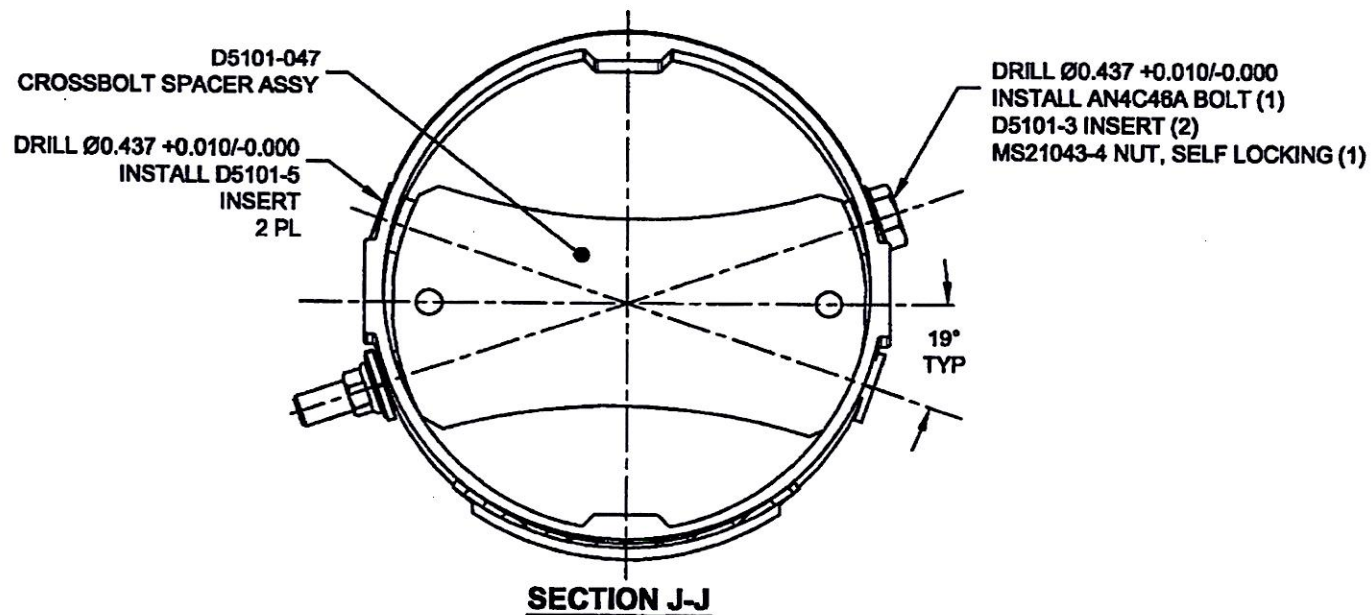
**D3905-045 FLOAT SKIDTUBE ASSY
WITH TRAINING WEARPLATE**

RELEASED
2016-11-01
an

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DRAWING NO. D3905	TITLE A119 FLOAT SKIDTUBE ASSY	REV. A	DART AEROSPACE USA, INC. ENGINEERING ORDER		D.E.O. NO. D3905-D-1	SHEET NO. SHEET 3 OF 3	SCALE NTS
DRAWN AJS	CHECKED <i>UP</i>	MFG. APPR. <i>AA</i>	APPROVED <i>DU</i>		DE APPR. <i>HA</i>		
DATE 16.10.31	DATE 16/11/01	DATE 16.11.01	DATE 2016.11.01		DATE 2016.11.01		

SHEET 7 ADD SECTION J-J AND DETAIL K TO THE FACE OF DRAWING AS SHOWN:



DETAIL K

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2016-11-01

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